A CHECKLIST OF HELMINTH PARASITES OF AUSTRALIAN AMPHIBIA

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BARTON, D. P. 1994. A checklist of helminth parasites of Australian Amphibia. *Rec. S. Aust. Mus.* **27**(1): 13–30.

This checklist includes all original references, and any other references which do more than repeat original work, of helminths occurring in Australian amphibians published up to 1992. Museum listings are also included, where available. Most records pertain to free-ranging animals; where they do not, they have been annotated appropriately.

Helminths are arranged as follows: Monogenea, Digenea, Cestoda, Nematoda, Acanthocephala, in both the parasite-host and host-parasite checklists.

Hosts are presented by family with consideration given to recent taxonomic changes.

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Manuscript received 20 August 1992.

Introduction

In 1939 May Young produced a checklist of helminth parasites recorded from Australian hosts. Thirteen amphibian hosts, infected with a total of 30 helminth species, were included. There has been no further compilation of solely Australian records from amphibians since then. The aim of this work is to produce an updated checklist of amphibian helminth parasites in Australia.

Included in this checklist are all original references, and any other references which do more than repeat original work, published up to 1992. Museum collections of amphibian parasites are also included, where available. Most records pertain to free ranging animals; where they do not, they have been annotated appropriately (e.g. experimental).

Comments on host taxonomy

Host names used in this checklist follow Cogger (1992), with the following exceptions:

i) *Kyarranus* Moore, 1958 is accepted as a valid genus (see Frost 1985).

ii) *Litoria pearsoniana* (Copland, 1961) is accepted as a valid species (see Frost 1985).

In the parasite-host checklist, host names are given as they were listed in the original publications. In the host-parasite checklist, the names have been updated to those used by Cogger (1992). The original names are also given with reference to the new name when there is an element of confusion.

All species formerly referred to the family Leptodactylidae are now placed in the family Myobatrachidae (see Cogger 1992).

All *Hyla* species are now referred to the genus *Litoria* (see Cogger 1992).

Limnodynastes dorsalis and *L. d. dumerilii* recorded from South Australia, Queensland and New South Wales are referred to *L. dumerilii*. *Limnodynastes dorsalis* is only present in Western Australia (see Cogger 1992).

Litoria aurea and *L. a. raniformis* recorded from South Australia, Victoria and Tasmania are referred to *L. raniformis* (see Cogger 1992).

Litoria aurea recorded from Western Australia is referred to *Litoria* spp., as the range of *L. aurea* does not extend to Western Australia (see Cogger 1992).

Crinia sp. recorded from the Flinders Ranges, South Australia, in the Australian Helminthological Collection (AHC) list are most likely *C. riparia*. A group of these frogs was collected from Warren Gorge, which is within the range of *C. riparia* (Dr Margaret Davies, pers. comm.). A more precise geographical location is, however, required to differentiate *C. riparia* from *C. signifera*, so they must remain *Crinia* sp.

Litoria jervisiensis recorded from South Australia is referred to *L. ewingii* (see Cogger 1992).

Mixophyes sp. collected from the Bunya Mts, Queensland (AHC 6172), could be either *M. fasciolatus* or *M. iteratus*. Examination of the host specimen would be needed to determine the exact species.

Uperoleia marmorata collected from New England National Park, New South Wales (AHC 8055), could be either *U. rugosa* or *U. laevigata*. Davies & Littlejohn (1986) showed both species to be present in this region, while *U. marmorata* was restricted to the north-west of Western Australia. All *U. marmorata* in this checklist are from eastern Australia and helminths from these host specimens are referred to *Uperoleia* spp. Again, examination of the host specimen would be needed to determine which species is correct.

Bufo marinus was introduced to Australia in 1935

from South America (via Hawaii) (Easteal 1981). It is 'naturally' found in Queensland, northern New South Wales and eastern Northern Territory. Any locations recorded out of this range are from laboratory animals acquired from a commercial supplier.

Records of helminths from frogs in New Guinea are included only if that frog species is also found in Australia.

Comments on helminth taxonomy

Helminth nomenclature follows Prudhoe & Bray (1982) for Monogenea, Digenea and Cestoda, the CIH Keys to the Nematode Parasites of Vertebrates (Hartwich 1974; Chabaud 1975*a*, 1975*b*, 1978; Anderson & Bain 1976, 1982; Petter & Quentin 1976; Durette-Desset 1983) and Spencer Jones & Gibson (1987) for the Nematoda, and Amin (1985) for the Acanthocephala.

The taxonomic status of many genera and species infecting amphibians is in need of revision. Generally, original records of helminths are treated as correct, unless it is known to the author that appropriate revision has taken place.

All helminths are recorded in the parasite-host checklist under the current name with any synonyms also listed.

All previous records of lung nematodes from Australian frogs have been referred to *Rhabdias hylae* Johnston & Simpson, 1942, by Ballantyne (1971), a view accepted in this checklist.

Nasir & Diaz (1971) synonymised the Australian representatives of the genus *Mesocoelium* as *M. megaloon* Johnston, 1912, and *M. monas* (Rudolphi, 1819), Teixeira de Freitas, 1958 (*M. microon* Nicoll, 1914, *M. mesembrinum* Johnston, 1912, *M. oligoon* Johnston, 1912). This is not accepted here, pending further work on the genus.

Frogs often serve as an intermediate host for cestodes, being infected with plerocercoids/spargana in the musculature. The identification of this life cycle stage is impossible without knowledge of the definitive host. In other groups (Acanthocephala, Digenea), larval stages are often identifiable.

Explanation of Format

This checklist has been compiled from all published records up to 1992 known to the author, and from lists of museum holdings.

References to Prudhoe & Bray (1982) on microfiche are shown as 'mf' following the page number.

The lists are arranged as follows:

1. Parasite species are arranged systematically. The amphibian hosts are listed for each helminth followed by the state or territory of origin (? denotes the state or territory was not referred to), literature references, and museum collection numbers, where available. The hosts are arranged with the type host first and all others listed alphabetically after.
2. Host species are arranged alphabetically within each family. The helminths from each host species are listed below the host with the phase of development and site of infection recorded, where known.
3. References.

Authors whose names appear frequently are referred to, where appropriate, by initials, as follows:

LMA L. Madeline Angel
MRY May R. Young
PMM Patricia M. Mawson
SJJ Stephen J. Johnston
THJ T. Harvey Johnston

The major helminth parasite groups are referred to by their initials:

M Monogenea
D Digenea
C Cestoda
N Nematoda
A Acanthocephala

Museums and other sources which are referred to as having amphibian parasites in their collection are abbreviated as follows:

AHC Australian Helminthological Collection, (in the South Australian Museum) Adelaide, SA
AM Australian Museum, Sydney, NSW
BM(NH) Natural History Museum, London, England
CAS Institute of Parasitology, Czechoslovak Academy of Sciences, Ceské Budejovice, Czechoslovakia
QM Queensland Museum, Brisbane, Qld
SAM South Australian Museum, Adelaide, SA
SP Personal collection of Ms Sylvie Pichelin, Parasitology Department, University of Queensland, Brisbane, Qld
TM Tasmanian Museum and Art Gallery, Hobart, Tas

State names are abbreviated as follows:

NSW New South Wales
NT Northern Territory
Qld Queensland
SA South Australia, including Kangaroo I. & Pearson I.

Tas	Tasmania, including Bass Strait Islands (King & Flinders)
Vic	Victoria
WA	Western Australia

ORDER AND ARRANGEMENT OF PARASITES AS PRESENTED UNDER EACH HOST

1. Phylum Platyhelminthes

Class Monogenea Carus, 1863
Order Polyopisthocotylea Odhner, 1912

Family POLYSTOMATIDAE Carus, 1863, emended Gamble, 1896
Subfamily Polystomatinae Gamble, 1896

Class Trematoda Rudolphi, 1808
Order Digenea Van Beneden, 1858
Suborder Prosostomata Odhner, 1905

Family PARAMPHISTOMATIDAE Fischoeder, 1901
Subfamily Diplodiscinae Cohn, 1904

Family GORGODERIDAE Looss, 1901

Family ALLOCREADIIDAE Stossich, 1903

Family PLAGIORCHIIDAE Lühe, 1901, emended Ward, 1917
Subfamily Haematoloechinae Teixeira de Freitas & Lent, 1939, emended Yamaguti, 1958

Family TELORCHIIDAE Stunkard, 1924
Subfamily Opisthioglyphinae Dollfus, 1949

Family BRACHYCOELIIDAE Johnston, 1912

Family LECITHODENDRIIDAE Odhner, 1910

Family BRACHYLAIMIDAE Joyeux & Foley, 1930

Family DIPLOSTOMIDAE Poirier, 1886

Family DOLICHOPERIDAE Yamaguti, 1971

Not further identified

Class Cestoidea Rudolphi, 1808
Order Pseudophyllidea Carus, 1863

Family DIPHYLLOBOTHRIIDAE Lühe, 1910

Order Proteocephalidea Mola, 1928

Family PROTEOCEPHALIDAE La Rue, 1911

Order Cyclophyllidea Braun, 1900

Family NEMATOTAENIIDAE Lühe, 1910

Not further identified

2. Phylum Nematoda

Class Secernentea
Order Rhabditida

Superfamily Rhabditoidea
Family RHABDIASIDAE Railliet, 1916

Order Strongylida

Superfamily Trichostrongyloidea
Family MOLINEIDAE (Skrjabin & Schulz, 1937) Durette-Desset & Chabaud, 1977

Order Oxyurida

Superfamily Oxyuroidea
Family PHARYNGODONIDAE Travassos, 1919

Order Ascaridida

Superfamily Cosmocercoidea
Family COSMOCERCIDAE (Railliet, 1916, subfam.) Travassos, 1925

Superfamily Ascaridoidea
Family ASCARIDIDAE Baird, 1853

Order Spirurida

Superfamily Physalopteroidea
Family PHYSALOPTERIDAE (Railliet, 1893, subfam.) Leiper, 1908

Superfamily Habronematoidea
Family HEDRURIDAE Railliet, 1916

Superfamily Filarioidea

Not further identified

3. Phylum Acanthocephala

Class Palaeacanthocephala Meyer, 1931
Order Echinorhynchida Southwell & MacFie, 1925

Family ECHINORHYNCHIDAE Cobbold, 1876

Order Polymorphida Petrochenko, 1956

Family PLAGIORHYNCHIDAE Golvan, 1960

Not further identified

ORDER AND ARRANGEMENT OF HOSTS AS PRESENTED IN HOST-PARASITE CHECKLIST

Class Amphibia
Order Anura

Family MYOBATRACHIDAE
Adelotus
Arerophryne

Assa
Crinia
Geocrinia
Heleioporus
Hyperoleia
Kyarranus
Leptodactylid
Limnodynastes
Metacrinia
Mixophyes
Myobatrachid
Neobatrachus
Paracrinia
Philoria
Pseudophryne
Ranidella
Rheobatrachus
Taudactylus
Uperoleia

Family HYLIDAE
Chiroleptes
Cyclorana
Hyla
Litoria

Family RANIDAE
Rana

Family BUFONIDAE
Bufo

Unidentified Anura

PARASITE-HOST CHECKLIST

1. Phylum Platyhelminthes

Class Monogenea Carus, 1863
Order Polyopisthocotylea Odhner, 1912

Family POLYSTOMATIDAE Carus, 1863, emended Gamble, 1896
Subfamily Polystomatinae Gamble, 1896

Parapolystoma bulliense (Johnston, 1912), Ozaki, 1935
syn. *Polystomum bulliense* Johnston, 1912
Hyla phyllochroa, NSW, SJJ 1912: 297, AM W.346, QM GL 12109, GL 12160, AHC 2200 (wholemount), 2217–2219 (sections)
Hyla lesueurii, NSW, SJJ 1912: 297
Litoria citropa, NSW, AHC 5167
Litoria pearsoniana, Qld, SP

Parapolystoma sp.
Litoria nyakalensis, Qld, SP

Class Trematoda Rudolphi, 1808
Order Digenea Van Beneden, 1858
Suborder Prosostomata Odhner, 1905

Family PARAMPHISTOMATIDAE Fischoeder, 1901
Subfamily Diplodiscinae Cohn, 1904

Diplodiscus megalochrus Johnston, 1912
Hyla aurea, NSW, SJJ 1912: 302, AM W.332, QM GL 11851
Frog, NSW, AHC 3310
Hyla caerulea, Qld, THJ 1916*b*: 60
Limnodynastes peronii, NSW, SJJ 1912: 302
Litoria caerulea, Qld, Prudhoe & Bray 1982: 199 mf

Diplodiscus microchrus Johnston, 1912
Hyla ewingii, NSW, SJJ 1912: 307, AM W.333
Limnodynastes tasmaniensis, NSW, SJJ 1912: 307

Diplodiscus **sp.**
Bufo marinus, Qld, AHC 14, 2978, 3028, 3553, 3563, 3576, 3875
Hyla aurea, NSW, AHC 12683
Hyla caerulea, Qld, QM GL 12350

Amphistome
Bufo marinus, Qld, AHC 4944

Distoma **sp.**
Hyla aurea, ?, MRY 1939: 74

Family GORGODERIDAE Looss, 1901

Gorgodera australiensis Johnston, 1912
Hyla aurea, NSW, SJJ 1912: 326, AM W.340a, AM W. 395, AM W.19850, QM GL 11860, GL 12161
Limnodynastes dorsalis, SA, AHC 3511
Limnodynastes peronii, NSW, SJJ 1912: 326, AM W.340 (this number is given for *H. aurea* in SJJ 1912: 326, but in AM records is for *L. peronii*)

Gorgodera **sp.**
Hyla aurea, NSW, AHC 12680; Vic, AHC 4539; SA, AHC 3529, 3532
Limnodynastes dorsalis, SA, AHC 3498, 3502, 12698
Limnodynastes tasmaniensis, SA, AHC 3489

Family ALLOCREADIIDAE Stossich, 1903

Allocreadiidae sp.
Cyclorana cultripes, Qld, QM GL 11285

Family PLAGIORCHIIDAE Lühe, 1901, emended Ward, 1917
Subfamily Haematoleochinae Teixeira de Freitas & Lent, 1939, emended Yamaguti, 1958

Haematoleochus australis (S.J. Johnston, 1912), Inglis, 1932 syn. *Pneumonoeces australis* S.J. Johnston, 1912
Hyla aurea, NSW, SJJ 1912: 321, AM W.339, W.339a, W.396, W.19849; ?, QM GL 11868, GL 1197

Limnodynastes peronii, NSW, SJJ 1912: 321
Litoria aurea, Tas, AHC 5404
Litoria moorei, WA, Prudhoe & Bray 1982: 83 mf, BM(NH) 1967.10.23.7–9

Family TELORCHIIDAE Stunkard, 1924
Subfamily Opisthioglyphinae Dollfus, 1949

Dolichosaccus anartius (S.J. Johnston, 1912) Yamaguti, 1958
syn. *Brachysaccus anartius* S.J. Johnston, 1912
Hyla aurea, NSW, SJJ 1912: 317, AM W.337, W.398, QM GL 11846, AHC 12685, 12686; ?, QM GL 11868, GL 11997
Limnodynastes peronii, NSW, SJJ 1912:317

Dolichosaccus diamesus S.J. Johnston, 1912
Hyla freycineti, NSW, SJJ 1912: 315, AM W.336, W.19848

Dolichosaccus ischyrus S.J. Johnston, 1912
Limnodynastes dorsalis, NSW, SJJ 1912: 314, AM W.335
Hyla caerulea, NSW, SJJ 1912: 314; Qld, THJ 1916: 60

Dolichosaccus juvenilis (Nicoll, 1918), Travassos, 1930
syn. *Brachysaccus juvenilis* Nicoll, 1918
Chiroleptes brevipalmatus, Qld, Nicoll 1918: 368
Cyclorana cultripes, Qld, QM GL 11280

Dolichosaccus symmetrus (S.J. Johnston, 1912), Yamaguti, 1958
syn. *Brachysaccus symmetrus* Johnston, 1912
Hyla caerulea, NSW, SJJ 1912: 319, AM W.338
Bufo marinus, Qld, AHC 13

Dolichosaccus trypherus S.J. Johnston, 1912
Limnodynastes peronii, NSW, SJJ 1912: 310, AM W.334, QM GL 11850
Hyla aurea, NSW, SJJ 1912: 310, QM GL 11850; SA, AHC 12704
Limnodynastes dorsalis, SA, AHC 12699
Limnodynastes tasmaniensis, SA, AHC 3485, 3487, 3488
Litoria moorei, WA, BM(NH) 1968.4.19.16

***Dolichosaccus* sp.**
syn. *Brachysaccus* sp.
Bufo marinus, Qld, AHC 18, 2973, 2975, 3559, 3874, 4952, 4953, 5192
Hyla aurea, NSW, AHC 3527, 12682
Hyla caerulea, Qld, AHC 12690
Hyla sp., ?, MRY 1939: 75
Limnodynastes dorsalis, SA, AHC 3512, 3513, 12677
Limnodynastes fletcheri, SA, AHC 4583
Limnodynastes tasmaniensis, SA, AHC 3485, 3487, 3488

Family BRACHYCOELIIDAE Johnston, 1912

Mesocoelium megaloon S.J. Johnston, 1912
Hyla ewingii, NSW, SJJ 1912: 335, AM W.343
Litoria caerulea, ?, Freitas 1963: 179 (noted that this specimen should be *M. mesembrinum*)
Litoria ewingii, ?, Prudhoe & Bray 1982:117 mf

Mesocoelium mesembrinum S.J. Johnston, 1912
Hyla caerulea, NSW, SJJ 1912: 330, AM W.341, W.341b, W.393, W.394, AHC 4538
Bufo marinus, Qld, Yuen 1965: 271
Litoria aurea, ?, Prudhoe & Bray 1982: 117
Litoria caerulea, Qld, THJ 1916*b*: 60; NSW, QM GL 11861

Mesocoelium microon Nicoll, 1914
Litoria caerulea, Qld, Nicoll 1914: 339, QM GL 11131
Cyclorana cultripes, Qld, QM GL 11278
Litoria gracilenta, Qld, Nicoll 1914: 339, QM GL 11169

Mesocoelium oligoon S.J. Johnston, 1912
Hyla citropus, NSW, SJJ 1912: 336 AM W.342

***Mesocoelium* sp.**
Bufo marinus, Qld, Freeland et al. 1986: 496, AHC 16, 17, 2967, 2973, 2975, 3138, 3876, 4949, 4951, 4955; SA, AHC 4547 (*Mesocoelium* sp. 2 of LMA)
Hyla caerulea, Qld, AHC 3517–3521, 3523, 3524

Family LECITHODENDRIIDAE Odhner, 1910

Pleurogenoides freycineti (S.J. Johnston, 1912), Travassos, 1930
syn. *Pleurogenes freycineti* Johnston, 1912
Hyla freycineti, NSW, SJJ 1912: 342, AM W.344

Pleurogenoides solus (S.J. Johnston, 1912), Travassos, 1930
syn. *Pleurogenes solus* Johnston, 1912
Hyla aurea, NSW, SJJ 1912: 345, AM W.345, W.19851, W.19852

***Pleurogenes* spp.**
Hyla spp., ?, MRY 1939: 75

Lecithodendriid sp.
Bufo marinus, Qld, Freeland et al. 1986: 496

Family BRACHYLAIMIDAE Joyeux & Foley, 1930

Zeylanurotrema spearei Cribb & Barton, 1991
Bufo marinus, Qld, Cribb & Barton 1991: 207, QM GL 1273, 1274–76, AHC 18984, BM(NH) 1990.12.7.3–5

Family DIPLOSTOMIDAE Poirier, 1886

Fibricola intermedius (Pearson, 1959),

Sudarikov, 1961
syn. *Neodiplostomum intermedium* Pearson, 1959
Hyla pearsoni, ?, diplostomula, Pearson 1961: 135
Hyla caerulea, paratenic host, ?, Pearson 1961: 136
Hyla latopalmata tadpole, ?, Pearson 1961: 135
Leptodactylid sp., ?, Pearson 1961: 135
Mixophyes fasciolatus tadpole, ?, Pearson 1961: 135

Family DOLICHOPERIDAE Yamaguti, 1971

Dolichoperoides macalpini (Nicoll, 1918), Johnston & Angel, 1940
syn. *Dolichopera macalpini* Nicoll, 1918
Limnodynastes sp. tadpole, SA, metacercaria, THJ & Angel 1940: 381, AHC 201320
Hyla aurea raniformis, SA, metacercaria, THJ & Angel 1940: 382
Limnodynastes dorsalis (*dumerili*), SA, metacercaria, THJ & Angel 1940: 382
Limnodynastes tasmaniensis (*platycephalus*), SA, metacercaria, THJ & Angel 1940: 382
Tadpole, SA, metacercaria, AHC 2725

Digenea Not Further Identified

Cercaria ameriannae T.H. Johnston & Beckwith, 1947
Limnodynastes sp., SA, diplostomula, (experimental), THJ & Beckwith 1947: 578, AHC 20219
Tadpole, SA, diplostomula, (experimental), AHC 2272

Cercaria angelae T.H. Johnston & Simpson, 1944
Limnodynastes tasmaniensis tadpole, SA, cysts, AHC 2825; experimental infection of *L. tasmaniensis* tadpoles produced *Tetracotyle* cysts (THJ & Simpson 1944: 131)
Tadpole, SA, metacercaria, AHC 2829, cysts, AHC 2831, 2833

Cercaria ellisi T.H. Johnston & Simpson, 1944
Crinia signifera tadpole, SA, metacercaria, (experimental), THJ & Simpson 1944: 89
Tadpole, SA, cyst, AHC 20206

Cercaria lethargica T.H. Johnston & Muirhead, 1949
Tadpole, SA, AHC 2821

Cercaria natans T.H. Johnston & Muirhead, 1949
Limnodynastes tasmaniensis tadpole, SA, (experimental), THJ & Muirhead, 1949: 104 (belongs to *Echinostomum* group); AHC 12402

***Cercaria* sp.**
Tadpole, SA, (K.l. stylet: experimental), AHC 20260 (Echinostome J: experimental), AHC 20261
(Stylet J.W.: experimental), AHC 20262

Diplostomula
Hyla aurea, SA, AHC 12390
Hyla peronii, SA, AHC 12838
Limnodynastes sp., SA, (experimental), AHC 12398
Limnodynastes tasmaniensis, SA, AHC 4125, 4134, 12702

Echinostome cysts
Frog, SA, AHC 12712
Hyla aurea, SA, AHC 12713
Tadpole, SA, AHC 12387; (experimental), AHC 12722

***Halipegus* sp.**
Litoria caerulea, NT, AHC 5405

Plagiorchid cysts
Hyla aurea, SA, AHC 12388

Strigeid cysts
Hyla aurea, SA, AHC 12384, 12386, 12394
Limnodynastes tasmaniensis, SA, AHC 12380

***Tetracotyle* cysts**
Hyla aurea, SA, AHC 12382

Digenea cysts
Bufo marinus, Qld, cysts, Freeland et al. 1986: 494
Frog, NSW, cysts, AHC 12393
Hyla aurea, NSW, cysts, AHC 12372, 12373, 12390, 12392, 12718–12721
Hyla peroni, SA, cysts, AHC 12401
Limnodynastes dorsalis, SA, cysts, AHC 12369, 12385, 12400, 12406, 12407
Limnodynastes tasmaniensis, SA, cysts, AHC 12370, 12371, 12389, 12395, 12397, 12399, 12406, 12407
Tadpole, SA, cysts, AHC 12375–12377, 12403; (experimental), AHC 12379

Digenea
Bufo marinus, Qld, Freeland et al. 1986: 496; Qld, AHC 15, 19, 2004, 2969, 2971, 2977, 3145, 3157, 3309, 3313, 3535–3552, 3555–3558, 3561, 3562, 3564–3575, 3577–3580, 3880, 3947, 4077, 4078, 4099, 4101, 4215, 4351, 4889, 5020, 5021
Hyla aurea, NSW, AHC 12687, 12681, 4546, 4537, 4536, 4535; SA, AHC 3520, 4083, 4341, 4579, 12688
Hyla peroni, SA, AHC 12396
Limnodynastes dorsalis, SA, AHC 3494–3497, 3499–3501, 3504–3510, 4545, 4548–4550, 12676, 12700
Limnodynastes fletcheri, SA, AHC 12678
Limnodynastes sp., SA, AHC 3478–3480, 3482, 3483
Limnodynastes tasmaniensis, SA, AHC 1877, 3484
Litoria caerulea, Qld, AHC 3522, 3525, 3526, 12691; NT, AHC 4544

Litoria dahlii, NT, AHC 6809, 6993
Litoria moorei, WA, AHC 8545
Litoria rothii, Qld, AHC 7181
Rheobatrachus silus, Qld, AHC 6232
Taudactylus diurnus, Qld, AHC 8237

Class Cestoidea Rudolphi, 1808
Order Pseudophyllidea Carus, 1863

Family DIPHYLLOBOTHRIIDAE Lühe, 1910

?*Ligula* sp.
Hyla aurea, NSW, larval stage, Haswell 1890: 661 (recorded as having possible affinities with *Ligula*)
Hyla caerulea, Qld, AHC 2350–2352
Spirometra erinacei Rudolphi, 1819
Litoria rubella, NT, AHC 17857
Diphyllobothriidae spargana
(?*Diphyllobothrium* (=*Spirometra*) *erinacei* (Rudolphi, 1819))
Bufo marinus, Qld, AHC 4100
Hyla aurea, NSW, WA, THJ 1912: 70
Hyla caerulea, Qld, NSW, THJ 1912: 70
Hyla latopalmata, ?, (experimental), Sandars 1953: 67
Hyla latopalmata tadpole, ?, (experimental), Sandars 1953: 67
? *Spirometra mansoni* (Cobbold, 1882), Stiles & Taylor, 1902 *Bufo marinus*, spargana, Bennett 1978: 756

Order Proteocephalidea Mola, 1928

Family PROTEOCEPHALIDAE La Rue, 1911

***Ophiotaenia* sp.**
Hyla aurea, ?, SJJ 1914: 44; SA, AHC 2825
Proteocephalus hylae (S.J. Johnston, 1912), Prudhoe & Bray, 1982
syn. *Ophiotaenia hylae* S.J. Johnston, 1912
Hyla aurea, NSW, THJ 1912: 63
Litoria aurea, NSW, QM G 423
Litoria moorei, WA, BM(NH) 1968.4.19.1–5; AHC 8178
Proteocephalid plerocercoids
Bufo marinus, Qld, Freeland et al. 1986: 496
Crinia laevis, Tas, Hickman 1960: 20
Crinia signifera, Tas, Hickman 1960: 20
Hyla aurea, Vic, AHC 2327; SA, AHC 8696
Limnodynastes peronii, Tas, Hickman 1960: 20

Order Cyclophyllidea Braun, 1900

Family NEMATOTAENIIDAE Lühe, 1910

Cylindrotaenia criniae (Hickman, 1960), Jones, 1987
syn. *Baerietta criniae criniae* Hickman, 1960
Crinia tasmaniensis, Tas, Hickman 1960: 18, TM K710–712
Ranidella tasmaniensis, Tas, Jones 1987: 207
Cylindrotaenia minor (Hickman, 1960), Jones, 1987
syn. *Barietta criniae minor* Hickman, 1960
Crinia tasmaniensis, Tas, Hickman 1960: 18
Crinia laevis, Tas, Hickman 1969: 18
Crinia signifera, Tas, Hickman 1960: 18; TM K716–717
Ranidella tasmaniensis, Tas, Jones 1987: 211
Assa darlingtoni, NSW, Jones 1987: 212, QM GL 4887; Qld, Jones & Delvinquier 1991: 492
Geocrinia laevis, Tas, Jones 1987: 211
Philoria loveridgei, Qld, Jones & Delvinquier 1991: 492
Ranidella signifera, Tas, Jones 1987: 211
Nematotaenia hylae Hickman, 1960
Hyla ewingii, Tas, Hickman 1960: 8, TM K705, K707–709
Litoria ewingii, Tas, Jones 1987: 184, 185
Bufo marinus, Qld, Jones & Delvinquier 1991: 492
Crinia signifera, Tas, Hickman 1960: 8, TM K706
Cyclorana novaehollandiae, Qld, Jones & Delvinquier 1991: 492
Limnodynastes ornatus, Qld, Jones & Delvinquier 1991: 492
Litoria fallax, Qld, Jones 1987: 185
Litoria inermis, Qld, Jones 1987: 185
Litoria latopalmata, Qld, Jones 1987: 185, QM GL 4886
Litoria pallida, Qld, Jones & Delvinquier 1991: 492
Litoria peronii, Qld, Jones & Delvinquier 1991: 492
Ranidella parinsignifera, Qld, Jones 1987: 185, QM GL 4887
Ranidella signifera, Tas, Jones 1987: 184, 185
Ranidella riparia, SA, Jones & Delvinquier 1991: 492
Uperoleia rugosa, Qld, Jones & Delvinquier 1991: 492
***Nematotaenia* sp.**
Hyla caerulea, ?, MRY 1939: 74; NSW, THJ 1916*a*: 195, Prudhoe & Bray 1982:12 mf
Hyla freycineti, ?, MRY 1939: 75; NSW, THJ 1916*a*: 194, Prudhoe & Bray 1982:12 mf
Hyperoleia marmorata, ?, MRY 1939: 75; NSW, THJ 1916*a*: 194, Prudhoe & Bray 1982: 12 mf
Triplotaenia mirabilis Boas, 1902
Hyla aurea, ?, MRY 1939: 74 (usually a cestode of marsupials; see Prudhoe & Bray 1982:3 mf for discussion)

Cestoda Not Further Identified

Bufo marinus, Qld, AHC 10, 46, 4892
Crinia signifera, SA, AHC 4419, 4424, 20687
Crinia sp., SA, AHC 4234
Hyla aurea, NSW, SJJ 1912: 291; Vic, AHC 2326; SA, larva, AHC 4584
Hyla caerulea, NSW, SJJ 1912: 290; Qld, AHC 1223
Hyla ewingi, NSW, AHC 4082; SA, AHC 4304, 4369
Hyla ewingi alpina, NSW, AHC 4079–4081
Hyla freycineti, NSW, SJJ 1912: 291
***Hyla* sp.**, SA, AHC 40
Hyperoleia marmorata, NSW, SJJ 1912: 290
***Limnodynastes* sp.**, Qld, AHC 2376; SA, AHC 2378
Metacrinia nichollsi, WA, AHC 48
Rheobatrachus silus, Qld, AHC 8913
Frog, SA, AHC 20678

2. Phylum Nematoda

Class Secernentea
Order Rhabditida

Superfamily Rhabditoidea
Family RHABDIASIDAE Railliet, 1916

Rhabdias australiensis Moravec & Sey, 1990
Rana daemeli, Qld, Moravec & Sey 1990: 283, CAS N–450
Rhabdias hylae Johnston & Simpson, 1942
Hyla aurea, NSW, THJ & Simpson 1942: 176, SJJ 1912: 291 (lung nematode); VIC, THJ & Simpson 1942: 176; SA, Ballantyne 1971: 51
Adelotus brevis, Qld, Ballantyne 1971: 51
Crinia georgiana, WA, Ballantyne 1971: 51
Crinia glauerti, WA, Ballantyne 1971: 51
Crinia insignifera, WA, Ballantyne 1971: 51
Crinia leai, WA, Ballantyne 1971: 51
Crinia signifera, NSW, SA, Ballantyne 1971: 50
Crinia subinsignifera, WA, Ballantyne 1971: 51
Crinia victoriana, Vic, Ballantyne 1971: 50
Hyla aurea raniformis, Vic, Ballantyne 1971: 50
Hyla caerulea, QLD, THJ & Simpson 1942: 176
Hyla latopalmata, Qld, Ballantyne 1971: 51
Hyla lesueuri, Qld, Ballantyne 1971: 51
Hyla peroni, NSW, SJJ 1912: 290 (lung nematode); THJ & Simpson 1942: 178
Limnodynastes dorsalis, NSW, THJ & Simpson 1942: 179
Limnodynastes fletcheri, Qld, Ballantyne 1971: 51
Limnodynastes peroni, NSW, SJJ 1912: 290 (lung nematode); THJ & Simpson 1942: 179; Qld, Ballantyne 1971: 51; SA, Ballantyne 1971: 51
Limnodynastes tasmaniensis, NSW, SJJ 1912: 290 (lung nematode), THJ & Simpson 1942: 176; SA, THJ & Simpson 1942: 176, Ballantyne 1971: 50; Vic, Ballantyne 1971: 50
Mixophyes fasciolatus, Qld, Ballantyne 1971: 51
Pseudophryne bibronii, NSW, Ballantyne 1971: 50
Pseudophryne guentheri, WA, Ballantyne 1971: 51
Pseudophryne occidentalis, WA, Ballantyne 1971: 51
Pseudophryne sp., SA, Ballantyne 1971: 51
Rhabdias nigrovenosum (Goeze, 1800)
syn. *Rhabdonema nigrovenosum* Goeze, 1800; listed as a synonym of *Rhabdias bufonis* (Schrank, 1788) in Yamaguti 1961: 84
Hyla aurea, ?, AM W.19853–6
***Rhabdias* sp.**
Hyla aurea, NSW, VIC, THJ & Simpson 1942: 178 (referring to THJ 1938: 151); WA, BM(NH) 1989.1987–1988
Hyla moorei, WA, BM(NH) 1980.263–282
***Rhabdonema* sp.**
Hyla aurea, NSW, Vic, THJ & Simpson 1942: 178 (referring to Haswell 1891)
Hyla caerulea, QLD, THJ 1916*b*: 60

Order Strongylida

Superfamily Trichostrongyloidea
Family MOLINEIDAE (Skrjabin & Schulz, 1937) Durette-Desset & Chabaud, 1977

Oswaldocruzia* (*O.*) *limnodynastes T.H. Johnston & Simpson, 1942
Limnodynastes dorsalis, SA, THJ & Simpson 1942: 172; THJ & PMM 1949: 65
Hyla aurea, NSW, Vic, THJ & Simpson 1942: 172
Hyla peroni, SA, THJ & PMM 1949: 65

Order Oxyurida

Superfamily Oxyuroidea
Family PHARYNGODONIDAE Travassos, 1919

Parathelandros australiensis (Johnston & Simpson, 1942), Inglis, 1968
syn. *Cosmocerca australiensis* Johnston & Simpson, 1942
Limnodynastes dorsalis, SA, THJ & Simpson 1942: 176
Limnodynastes fletcheri, SA, Inglis 1968: 173
Parathelandros carinae Inglis, 1968

Heleioporus albopunctatus, WA, Inglis 1968: 176
Heleioporus australiacus, WA, Inglis 1968: 176
Heleioporus eyrei, WA, Inglis 1968: 176
Heleioporus psammophilus, WA, Inglis 1968: 176
Neobatrachus pelobatoides, WA, Inglis 1968: 176

Parathelandros johnstoni Inglis, 1968
Heleioporus eyrei, WA, Inglis 1968: 175
Limnodynastes dorsalis, WA, Inglis 1968: 175
Neobatrachus centralis, WA, Inglis 1968: 175 (specimens in poor condition, may be *P. maini* or *P. limnodynastes*)
Neobatrachus pelobatoides, WA, Inglis 1968: 175

Parathelandros limnodynastes (Johnston & Mawson, 1942), Inglis, 1968
syn. *Pharyngodon limnodynastes* Johnston & Mawson, 1942
Limnodynastes dorsalis, SA, THJ & PMM 1942: 94; Inglis 1968: 175
Limnodynastes dorsalis dumerili, SA, THJ & PMM 1942: 94

Parathelandros maini Inglis, 1968
Hyla moorei, WA, Inglis 1968: 176
Hyla adelaidensis, WA, Inglis 1968: 176
Hyla cyclorhyncha, WA, Inglis 1968: 176

Parathelandros mastigurus Baylis, 1930
Hyla caerulea, Qld, Baylis 1930: 359, Inglis 1968: 173; NSW, Inglis 1968: 173
Bufo marinus, Qld, Inglis 1968: 173
Hyla gracilenta, Qld, Baylis 1930: 359
Hyla gracilis, Qld, Inglis 1968: 173 (refers to *Hyla gracilenta* recorded by Baylis 1930)

Parathelandros propinqua (Johnston & Simpson, 1942), Inglis, 1968
syn. *Cosmocerca propinqua* Johnston & Simpson, 1942
Limnodynastes dorsalis, SA, THJ & Simpson 1942: 176

***Parathelandros* spp.**
Bufo marinus, Qld, Freeland et al. 1986: 496
Hyla aurea, WA, (female only), BM(NH) 1980.283–292
Hyla rubella, WA, (female only), BM(NH) 1980.318–317
Oxyurids Not Further Identified
Bufo marinus, Qld, AHC 2276, 4950; Vic, AHC 9048, 9059
Cyclorana sp., NT, AHC 4450
Hyla aurea, Vic, AHC 2311
Hyla caerulea, Qld, AHC 2343; NT, AHC 4947
Limnodynastes dorsalis, SA, AHC 2306, 3176
Limnodynastes tasmaniensis, SA, AHC 1417, 5030
Litoria rothii, Qld, AHC 7156
Litoria rubella, Qld, AHC 7180
Mixophyes sp., Qld, AHC 6172

Order Ascaridida

Superfamily Cosmocercoidea
Family COSMOCERCIDAE (Railliet, 1916 subfam.) Travassos, 1925

Cosmocerca limnodynastes Johnston & Simpson, 1942
Limnodynastes dorsalis, SA, THJ & Simpson 1942: 174

Cosmocercinae gen. sp. 1
Rana daemeli, Qld, Moravec & Sey 1990: 273

Austraplectana kartanum (Johnston & Mawson, 1941), Baker, 1981
syn. *Rallietnema kartanum* Johnston & Mawson, 1941
Hyla jervisiensis, SA, THJ & PMM 1941: 146
Heleioporus eyrei, WA, Inglis 1968: 166
Hyla moorei, WA, Inglis 1968: 166, BM(NH) 1967. 1158–1159
Litoria nasuta, Qld, Baker 1981: 111
Austraplectana sp.
Frog, Qld, Baker 1981: 116

Maxvachonia adamsoni Moravec & Sey, 1990
Litoria infrafrenata, New Guinea, Moravec & Sey 1990: 276, CAS N–449

Maxvachonia ewersi Mawson, 1972
Litoria nasuta, New Guinea, PMM 1972: 105

Maxvachonia flindersi (Johnston & Mawson, 1941), Mawson, 1972
syn. *Aplectana flindersi* Johnston & Mawson, 1941; *Austracerca flindersi* (Johnston & Mawson, 1941) Inglis 1968
Hyla jervisiensis, SA, THJ & PMM 1941: 148
Bufo marinus, Qld, PMM 1972: 104, AHC 5170
Heleioporus australiacus, WA, Inglis 1968: 165
Heleioporus barycragus, WA, PMM 1972: 104
Heleioporus inornatus, WA, PMM 1972: 104, AHC 5180
Heleioporus psammophilis, WA, Inglis 1968: 165
Hyla cyclorhyncha, WA, Inglis 1968: 165
Limnodynastes dorsalis, SA, PMM 1972: 104, AHC 5183
Litoria adelaidensis, WA, PMM 1972: 104, AHC 5172
Litoria caerulea, NT, PMM 1972: 104, AHC 5182
Litoria moorei, WA, PMM 1972: 104, AHC 5175

Falcaustra hylae (Johnston & Simpson, 1942), Chabaud & Golvan, 1957

syn. *Spironoura hylae* Johnston & Simpson, 1942
Hyla aurea, NSW, THJ & Simpson 1942: 173
Cosmocercoid
Bufo marinus, Qld, AHC 5009

Superfamily Ascaridoidea
Family ASCARIDIDAE Baird, 1853

Ophidascaris pyrrhus Johnston & Mawson, 1942
Tadpole, Qld, (experimental infection), QM GL 9107
Frog, Qld, QM GZ 15
Raillietascaris varani (Baylis & Daubney, 1922), Sprent, 1985
Tadpole, ?, QM GL 5674
Seuratascaris numidica (Seurat, 1917), Sprent, 1985
Rana daemeli, Qld, Sprent 1985: 241

Order Spirurida

Superfamily Physalopteroidea
Family PHYSALOPTERIDAE (Railliet, 1893 subfam.) Leiper, 1908

Pseudorictularia disparilis (Irwin-Smith, 1922), Dollfus & Desportes, 1945
syn. *Rictularia disparilis* Irwin-Smith, 1922
Litoria inermis, Qld, Owen & Moorhouse 1980: 1014
Litoria nigrofrenata, Qld, Owen & Moorhouse 1980: 1014
Rana daemeli, Qld, Owen & Moorhouse 1980: 1013
Physaloptera confusa T.H. Johnston & Mawson, 1942
Limnodynastes tasmaniensis, NSW, encysted larva, THJ & Simpson 1942: 178; SA, encysted larva, THJ & PMM 1949:69
Hyla aurea, NSW, encysted larva, THJ & PMM 1942: 91; THJ & Simpson 1942: 178
Hyla caerulea, Qld, encysted larva, THJ & Simpson 1942: 178
Hyla peroni, SA, encysted larva, THJ & PMM 1942: 91; THJ & PMM 1949: 69; THJ & Simpson 1942: 178
Limnodynastes dorsalis, SA, encysted larva, THJ & PMM 1942: 91; NSW, encysted larva, THJ & Simpson 1942: 178
Limnodynastes dorsalis dumerilii, SA, encysted larva, THJ & PMM 1942: 91; THJ & Simpson 1942: 178
***Physaloptera* sp.**
Cyclorana australis, WA, larva AHC 6399
Heleioporus eyrei, WA, AHC 3012
Hyla aurea, SA, AHC 12386
Limnodynastes dorsalis dumerilii, SA, cysts, AHC 2356 (frog taken from intestine of tiger snake, *Notechis scutatus*), 2375

Superfamily Habronematoidea
Family HEDRURIDAE Railliet, 1916

Hedruris hylae Johnston & Mawson, 1941
Hyla jervisiensis, SA, THJ & PMM 1941: 148
***Hedruris* sp.**
Crinia signifera, SA, AHC 28

Superfamily Filarioidea
Filarioidea ?gen. ?sp.

Filaria cochleata Railliet, 1916
syn. *Filaria spiralis* Oerley, 1882
Heleioporus albopunctatus, ?, Oerley 1882: 312

Nematoda Not Further Identified

***Agamonema* sp.**
Hyla caerulea, Qld, encysted larva, THJ 1914: 82
Dorylaimid
Frog, SA, AHC 6417
Nematode larvae
Bufo marinus, Qld, cysts, Freeland et al. 1986: 496
Hyla moorei, WA, BM(NH) 1980.298–307
Arenophryne rotunda, WA, cysts, AHC 6808
Hyla caerulea, Qld, cysts, AHC 2341
Nematodes
Bufo marinus, Qld, Freeland et al. 1986: 496, AHC 8,9, 2974, 3258
Crinia georgiana, WA, AHC 8081, 8079
Crinia glauerti, WA, AHC 8119, 8113
Crinia haswelli, Vic, AHC 8084
Crinia leai, WA, AHC 8115, 8082, 8078
Crinia pseudinsignifera, WA, AHC 8118, 8114
Crinia riparia, SA, AHC 8077
Crinia rosea, WA, AHC 8076
Crinia signifera, NSW, SJJ 1912:290; SA, AHC 20, 22–24, 3617, 6799, 8102, 8105; Vic, AHC 1083, 1098; NSW, AHC 8066
Crinia sp., Vic, AHC 21; SA, AHC 4210, 4211, 4214, 4217, 4219, 4231–4233
Crinia subinsignifera, WA, AHC 8080, 8075
Crinia victoriana, Vic, AHC 8122, 8069, 8070, 8088, 8096, 8099
Cyclorana australis, WA, AHC 12880
Heleioporus eryei, WA, AHC 8120
Hyla adelaidensis, NSW, AHC 1760
Hyla aurea, NSW, SJJ 1912: 291, AHC 3528, 2306, 2308, 2309, 2314–2316, 2318–2321, 2323, 2324; SA, AHC 3520
Hyla aurea raniformis, Vic, AHC 8094
Hyla caerulea, NSW, SJJ 1912: 290, AHC 2339, 2337, 2336, 2333, 2360; NT, AHC 2331; Qld, AHC 2349, 2346, 2344, 2342, 2340, 2338, 2335, 2235
Hyla dentata, NSW, SJJ 1912: 291

Hyla ewingii, NSW, SJJ 1912: 291; SA, AHC 8236
Hyla jervisiensis, SA, AHC 1759, 3615
Hyla lesueurii, NSW, SJJ 1912: 291; Qld, AHC 8238
Hyla peronii, NSW, SJJ 1912: 290; SA, AHC 12396
Hyla phyllochroa, NSW, SJJ 1912: 290
Kyarranus sphagnicolus, NSW, AHC 8247
Limnodynastes dorsalis, NSW, SJJ 1912: 290, AHC 2365, 3362, 2361, 2360; Vic, AHC 8068; Qld, AHC 2367; SA, AHC 2368, 3010, 3176, 8108, 8235
Limnodynastes fletcheri, NSW, AHC 8059
Limnodynastes peronii, NSW, SJJ 1912: 290, AHC 1728, 3477; SA, AHC 8103
Limnodynastes sp., Qld, AHC 2605
Limnodynastes tasmaniensis, NSW, SJJ 1912: 290, AHC 8064; Vic, AHC 36, 8087, 8100; SA, AHC 25, 26, 39, 1877, 1882, 3320, 3619, 3622, 5031, 8101, 8107, 8110, 12389
Litoria aurea, SA, AHC 8073
Litoria booroolongensis, NSW, AHC 8063
Litoria caerulea, Qld, AHC 8061, 8060
Litoria dahlii, NT, AHC 6809, 6993
Litoria ewingii, Vic, AHC 8071, 8072, 8095, 8097
Litoria nigrofrenata, Qld, AHC 6145
Litoria rothii, Qld, AHC 7181
Litoria verreauxii, NSW, AHC 8085
Mixophyes fasciolatus, Qld, AHC 8093, 8056
Neobatrachus pelobatoides, WA, AHC 8121, 8116
Neobatrachus pictus, SA, AHC 8104
Pseudophryne bibronii, Vic, AHC 8090; NSW, AHC 8062; SA, AHC 4213, 4218, 4220–4227, 8089, 8106, 8111
Pseudophryne guentheri, WA, AHC 8117, 8074
Pseudophryne occidentalis, WA, AHC 8112
Pseudophryne semimarmorata, SA, AHC 8109
Uperoleia marmorata, NSW, AHC 8055

3. Phylum Acanthocephala

Class Palaeacanthocephala Meyer, 1931
Order Echinorhynchida Southwell & MacFie, 1925

Family ECHINORHYNCHIDAE Cobbold, 1876

Acanthocephalus criniae Snow, 1971
Crinia tasmaniensis, Tas, Snow 1971: 147, TM K228–230, AHC 18165
Crinia laevis, Tas, Snow 1971: 147
Crinia signifera, Tas, Snow 1971: 147

Pseudoacanthocephalus perthensis Edmonds, 1971
Litoria moorei, WA, Edmonds 1971: 55; AHC 5048, 5051
Limnodynastes dorsalis, WA, Edmonds 1971: 55

Order Polymorphida

Family PLAGIORHYNCHIDAE Golvan, 1960

Porrorchis hylae (Johnston, 1914), Schmidt & Kuntz, 1967
syn. *Echinorhynchus* sp. Johnston, 1912; *Echinorhynchus hylae* Johnston, 1914; *Echinorhynchus bulbocaudatus* Southwell & MacFie, 1925; *Gordiorhynchus hylae* (Johnston, 1914), Johnston & Edmonds, 1948; *Pseudoporrorchis hylae* (Johnston, 1914), Edmonds, 1957
Limnodynastes dorsalis, SA, encysted larva, THJ & Edmonds 1948: 69
Bufo marinus, Qld, encysted larva, Freeland et al. 1986: 496 (identified by Edmonds 1989: 130)
Hyla aurea, NSW, encysted larva, THJ 1912: 84, THJ 1914: 83; SA, NSW, THJ & Edmonds 1948: 69
Hyla caerulea, Qld, encysted larva, THJ 1914: 83, THJ & Edmonds 1948:69

Acanthocephala Not Further Identified

***Acanthocephala* sp.**
Hyla caerulea, NSW, QM GL 12287
Hyla peronii, Qld, QM GL 12346

Acanthocephala
Limnodynastes sp., SA, AHC 3409; larva, AHC 3481

Host - parasite checklist

Order Anura

Family MYOBATRACHIDAE

Adelotus brevis (Günther, 1863)
N *Rhabdias hylae*, (lung)

Arerophryne rotunda Tyler, 1976
N Nematode larva, cysts

Assa darlingtoni (Loveridge, 1933)
C *Cylindrotaenia minor*, (intestine)

Crinia georgiana Tschudi, 1838
N *Rhabdias hylae*, (lung)
N Nematodes, (duodenum, rectum)

Crinia glauerti Loveridge, 1933
N *Rhabdias hylae*, (lung)
N Nematodes, (buccal cavity, rectum, ileum)

Crinia haswelli Fletcher, 1894
see *Paracrinia haswelli*

Crinia insignifera Moore, 1954
N *Rhabdias hylae*, (lung)

Crinia laevis Günther, 1864
see *Geocrinia laevis*

Crinia leai Fletcher, 1898
see *Geocrinia leai*

Crinia parinsignifera Main, 1957
C *Nematotaenia hylae*, (intestine)

Crinia pseudinsignifera Main, 1957
N Nematodes, (ileum)

Crinia riparia Littlejohn & Martin, 1965
C *Nematotaenia hylae*, (intestine)
N Nematodes, (rectum)

Crinia rosea Harrison, 1927
see *Geocrinia rosea*

Crinia signifera (Girard, 1853)
C proteocephalid plerocercoids, (mesentery & under skin)
C *Cylindrotaenia minor*, (duodenum, ileum)
C *Nematotaenia hylae*, (duodenum)
C Cestodes, (small intestine)
N *Rhabdias hylae*, (lung)
N *Hedruris* sp., (stomach)
N Nematodes, (stomach, intestine, buccal cavity, rectum, lung, abdominal cavity)
A *Acanthocephalus criniae*, (duodenum, ileum)

Crinia signifera (Girard, 1853) tadpole
D *Cercaria ellisi*, metacercaria, (kidney, mesenteries, heart lung), (experimental)

Crinia subinsignifera Littlejohn, 1957
N *Rhabdias hylae*, (lung)
N Nematodes, (rectum)

Crinia tasmaniensis (Günther, 1864)
C *Cylindrotaenia criniae*, (duodenum, ileum)
C *Cylindrotaenia minor*, (duodenum, ileum)
A *Acanthocephalus criniae*, (duodenum, ileum)

Crinia victoriana Boulenger, 1888
see *Geocrinia victoriana*

***Crinia* sp.**
C Cestodes, (intestine)
N Nematodes, (intestine, stomach, rectum)

Geocrinia laevis (Günther, 1864)
C proteocephalid plerocercoids, (mesentery)
C *Cylindrotaenia minor*, (duodenum, ileum)
A *Acanthocephalus criniae*, (duodenum, ileum)

Geocrinia leai (Fletcher, 1898)
N *Rhabdias hylae*, (lung)
N Nematodes, (abdominal cavity, duodenum)

Geocrinia rosea (Harrison, 1927)
N Nematodes, (rectum)

Geocrinia victoriana (Boulenger, 1888)
N *Rhabdias hylae*, (lung)
N Nematodes, (duodenum, rectum)

Heleioporus albopunctatus Gray, 1841
N *Parathelandros carinae*, (rectum)
N *Filaria cochleata*, (encapsulated between serous and muscular layers of stomach)

Heleioporus australiacus (Shaw & Nodder, 1795)
N *Parathelandros carinae*, (rectum)
N *Maxvachonia flindersi*, (rectum)

Heleioporus barycragus Lee, 1967
N *Maxvachonia flindersi*

Heleioporus eyrei (Gray, 1845)
N *Parathelandros carinae*, (rectum)
N *Parathelandros johnstoni*, (rectum)
N *Austraplectana kartanum*, (rectum)
N *Physaloptera* sp., (stomach)
Nematodes, (stomach)

Heleioporus inornatus (Lee & Main, 1954)
N *Maxvachonia flindersi*, (rectum)

Heleioporus psammophilus (Lee & Main, 1954)
N *Parathelandros carinae*, (rectum)
N *Maxvachonia flindersi*, (rectum)

Hyperolia marmorata (Gray, 1841)
see *Uperoleia* spp.

Kyarranus loveridgei (Parker, 1940)
C *Cylindrotaenia minor*, (intestine)

Kyarranus sphagnicolus Moore, 1958
N Nematodes, (rectum)

Leptodactylid sp.
see Myobatrachid sp.

Limnodynastes dorsalis (Gray, 1841)
for *Limnodynastes dorsalis* from any state, except WA, see *Limnodynastes dumerilii*
N *Parathelandros johnstoni*, (rectum)
A *Pseudoacanthocephalus perthensis*, (intestine)

Limnodynastes dorsalis dumerilii
see *Limnodynastes dumerilii*

Limnodynastes dumerilii Peters, 1863
D *Gorgodera australiensis*
D *Gorgodera* sp.
D *Dolichosaccus ischyrus*, (intestine)
D *Dolichosaccus trypherus*
D *Dolichosaccus* sp.
D *Dolichoperoides macalpini*, metacercaria, (tissues)
D Digenea cysts
D Digenea, (intestine, stomach)
N *Rhabdias hylae*, (lung)
N *Oswaldocruzia limnodynastes*, (intestine)
N *Parathelandros australiensis*, (rectum, intestine)
N *Parathelandros limnodynastes*
N *Parathelandros propinqua*, (rectum, intestine)
N Oxyurid
N *Cosmocerca limnodynastes*
N *Maxvachonia flindersi*, (rectum)
N *Physaloptera confusa*, encysted larva, (mesentery, stomach, peritoneum)
N *Physloptera* sp., cysts

N Nematodes, (stomach, intestine, rectum)
A *Porrorchis hylae*, encysted larva, (mesenteries)

Limnodynastes fletcheri Boulenger, 1888
D *Dolichosaccus* sp.
D Digenea
N *Rhabdias hylae*, (lung)
N *Parathelandros australiensis*, (rectum)
N Nematodes, (duodenum, rectum)

Limnodynastes ornatus (Gray, 1842)
C *Nematotaenia hylae*, (intestine)

Limnodynastes peronii (Duméril & Bibron, 1841)
D *Diplodiscus megalochrus*, (rectum)
D *Gorgodera australiensis*, (bladder)
D *Dolichosaccus anartius*, (intestine, rectum)
D *Dolichosaccus trypherus*, (duodenum)
D *Haematoleochus australis*, (lungs)
C proteocephalid plerocercoids, (mesentery)
N *Rhabdias hylae*, (lungs)
N Nematodes, (lungs, intestine, rectum, stomach)

Limnodynastes tasmaniensis Günther, 1858
D *Diplodiscus microchrus*, (rectum)
D *Gorgodera* sp.
D *Dolichosaccus trypherus*, (intestine)
D *Dolichosaccus* sp.
D *Dolichoperoides macalpini*, metacercaria (tissues)
D Diplostomula, (buccal cavity)
D Strigeid, cysts
D Digenea cysts, (muscles, subcutaneous)
D Digenea, (gut)
N *Rhabdias hylae*, (lung)
N Oxyurids, (abdominal cavity)
N *Physaloptera confusa*, encysted larva, (stomach, peritoneum)
N Nematodes, (lungs, stomach, intestine, rectum)

Limnodynastes tasmaniensis Günther, 1858 tadpole
D *Cercaria angelae*, cysts, (wall of thorax and rectum, pericardium, tail tissue, base of forleg), (experimental)
D *Cercaria natans*, (kidney tissue, kidney peritoneum), (experimental)

Limnodynastes tasmaniensis (platycephalus) Günther, 1867
see *Limnodynastes tasmaniensis*

***Limnodynastes* sp.**
D Diplostomula, (eye), (experimental)
D Digenea, (stomach, intestine, rectum)
C Cestodes, (coelom)
N Nematodes, (stomach)
A Acanthocephala, (mesentery)
A Acanthocephala, larva, (rectum)

***Limnodynastes* sp. tadpole**
D *Cercaria amerianna*, diplostomula, (tissues), (experimental)
D *Dolichoperoides macalpini*, metacercaria, (tissues)

Metacrinia nichollsi (Harrison, 1927)
C Cestodes

Mixophyes fasciolatus Günther, 1864
N *Rhabdias hylae*, (lung)
N Nematodes, (rectum)

Mixophyes fasciolatus Günther, 1864 tadpole
D *Fibricola intermedius*, metacercaria, (muscles)

***Mixophyes* sp.**
N Oxyurid

Myobatrachid sp.
D *Fibricola intermedius*, metacercaria, (muscle)

Neobatrachus centralis (Parker, 1940)
N *Parathelandros johnstoni*, (rectum)

Neobatrachus pelobatoides (Werner, 1914)
N *Parathelandros carinae*, (rectum)
N *Parathelandros johnstoni*, (rectum)
N Nematodes, (rectum)

Neobatrachus pictus Peters, 1863
N Nematodes, (rectum)

Paracrinia haswelli (Fletcher, 1894)
N Nematodes, (duodenum, rectum)

Philoria loveridgei Parker, 1940
see *Kyarranus loveridgei*

Pseudophryne bibronii Günther, 1858
N *Rhabdias hylae*, (lung)
N Nematodes, (duodenum, rectum, stomach)

Pseudophryne guentheri Boulenger, 1964
N *Rhabdias hylae*, (lung)
N Nematodes, (rectum)

Pseudophryne occidentalis Parker, 1940
N *Rhabdias hylae*, (lung)
N Nematodes, (rectum, stomach)

Pseudophryne semimarmorata Lucas, 1892
N Nematodes, (rectum)

***Pseudophryne* sp.**
N *Rhabdias hylae*, (lung)

***Ranidella* spp.**
for all *Ranidella* species, see the *Crinia* equivalent

Rheobatrachus silus Liem, 1973
D Digenea, (rectum)
C Cestodes

Taudactylus diurnus Straughan & Lee, 1966
D Digenea, (rectum)

Uperoleia marmorata Gray, 1841
for *Uperoleia marmorata* from all states, except WA, see *Uperoleia* spp.

Uperoleia rugosa (Andersson, 1916)
C *Nematotaenia hylae*, (intestine)

***Uperoleia* spp.**
C *Nematotaenia* sp.
C Cestodes, (small intestine)
N Nematodes, (rectum)

Family HYLIDAE

Chiroleptes brevipalmatus Peters, 1871
see *Cyclorana brevipes*

Cyclorana australis (Gray, 1842)
N *Physaloptera* sp., larva, (buccal cavity)
N Nematodes

Cyclorana brevipes (Peters, 1871)
D *Dolichosaccus juvenilis*, (intestine)

Cyclorana cultripes Parker, 1940
D Allocreadiidae sp.
D *Dolichosaccus juvenilis*
D *Mesocoelium microon*

Cyclorana novaehollandiae Steindachner, 1867
N *Nematotaenia hylae*, (intestine)

***Cyclorana* sp.**
N Oxyurids, (rectum)

***Hyla* spp.**
for all *Hyla* species, see the *Litoria* equivalent, with the following exceptions:

i) *Hyla aurea* Lesson, 1829
for *Hyla aurea* from NSW (coastal area), see *Litoria aurea*
for *Hyla aurea* from SA, Tas, Vic, NSW (exclusive of coastal area), see *Litoria raniformis*
for *Hyla aurea* from WA, see *Litoria* spp.

ii) *Hyla ewingi alpina* Fry, 1915
see *Litoria verreauxii*

iii) *Hyla jervisiensis* Duméril & Bibron, 1841
for *Hyla jervisiensis* from all states, except SA, see *Litoria jervisiensis*
for *Hyla jervisiensis* from SA see *Litoria ewingii*

Litoria adelaidensis (Gray, 1841)
for *Litoria adelaidensis* from all states, except WA, see *Litoria* spp.
N *Parathelandros maini*, (rectum)
N *Maxvachonia flindersi*, (intestine)

Litoria aurea (Lesson, 1829)
for *Litoria aurea* from Vic, Tas, SA, NSW (exclusive of coastal area), see *Litoria raniformis*
for *Litoria aurea* from WA, see *Litoria* spp.
D *Diplodiscus megalochrus*, (rectum)
D *Diplodiscus* sp., (rectum)
D *Distoma* sp.
D *Gorgodera australiensis*, (bladder)
D *Gorgodera* sp., (bladder)
D *Haematoleochus australis*, (lungs)
D *Dolichosaccus anartius*, (intestine, rectum)
D *Dolichosaccus trypherus*, (duodenum)
D *Dolichosaccus* sp.
D *Mesocoelium mesembrinum*
D *Pleurogenoides solus*, (intestine)
D Digenea cysts, (nerves, muscles, subcutaneous)
D Digenea, (lung, intestine, rectum)
C *?Ligula* sp., (muscles, peritoneal cavity, subdermal lymph sinuses)
C Diphyllobothriidae spargana, (thigh muscles)
C *Ophiotaenia* sp., (intestine)
C *Proteocephalus hylae*
C *Triplotaenia mirabilis*
C Cestodes, (intestine, muscle)
N *Rhabdias hylae*, (lung)
N *Rhabdias nigrovenosum*, (lung)
N *Rhabdias* sp., (lung)
N *Rhabdonema* sp.
N *Oswaldocruzia limnodynastes*, (intestine)
N *Falcaustra hylae*, (intestine)
N *Physaloptera confusa*, encysted larva, (mesentery)
N Nematodes, (lung, intestine, rectum, peritoneum, abdominal cavity, stomach)
A *Porrorchis hylae*, encysted larva, (mesenteries)

Litoria booroolongensis (Moore, 1961)
N Nematodes, (rectum, mesentery)

Litoria caerulea (White, 1790)
D *Diplodiscus megalochrus*
D *Diplodiscus* sp.
D *Dolichosaccus ischyrus*, (intestine)
D *Dolichosaccus symmetrus*, (rectum)
D *Dolichosaccus* sp.
D *Mesocoelium megaloon*, (intestine)
D *Mesocoelium mesembrinum*, (intestine, duodenum)
D *Mesocoelium microon*
D *Mesocoelium* sp.
D *Fibricola intermedius*, metacercaria, (muscles) paratenic host
D *Halipegus* sp.
D Digenea, (intestine)
C *?Ligula* sp.
C Diphyllobothriidae spargana, (thigh muscle)
C *Nematotaenia* sp.
C Cestodes, (rectum)
N *Rhabdias hylae*, (lung)
N *Rhabdonema* sp., (lungs)
N *Parathelandros mastigurus*, (small intestine, rectum)
N Oxyurid, (intestine)
N *Maxvachonia flindersi*
N *Physaloptera confusa*, encysted larva, (stomach, peritoneum)
N *Agamonema* sp., encysted larva, (stomach wall)
N Nematode larva, cysts, (intestine)
N Nematodes, (stomach, intestine, rectum, lung, buccal cavity, abdominal cavity, muscle)
A *Porrorchis hylae*, encysted larva, (liver)
A *Acanthocephala* sp.

Litoria citropa (Duméril & Bibron, 1841)
M *Parapolystoma bulliense*
D *Mesocoelium oligoon*, (duodenum)

Litoria cyclorhyncha (Boulenger, 1882)

N *Parathelandros maini*, (rectum)
N *Maxvachonia flindersi*, (rectum)

Litoria dahlii (Boulenger, 1896)
D Digenea
N Nematodes

Litoria dentata (Keferstein, 1868)
N Nematodes, (intestine)

Litoria ewingii (Duméril & Bibron, 1841)
D *Diplodiscus microchrus*, (rectum)
D *Mesocoelium megaloon*, (intestine)
C *Nematotaenia hylae*, (duodenum)
C Cestodes, (small intestine)
N *Austraplectana kartanum*
N *Maxvachonia flindersi*
N *Hedruris hylae*
N Nematodes, (intestine, rectum, duodenum, mesentery)

Litoria fallax (Peters, 1880)
C *Nematotaenia hylae*, (intestine)

Litoria freycineti Tschudi, 1838
D *Dolichosaccus diamesus*, (stomach)
D *Pleurogenoides freycineti*, (duodenum)
C *Nematotaenia* sp.
C Cestodes, (duodenum)

Litoria gracilenta (Peters, 1869)
D *Mesocoelium microon*
N *Parathelandros mastigurus*, (rectum)

Litoria inermis (Peters, 1867)
C *Nematotaenia hylae*, (intestine)
N *Pseudorictularia disparilis*, (stomach)

Litoria infrafrenata (Günther, 1867)
N *Maxvachonia adamsoni*, (intestine)

Litoria latopalmata Günther, 1867
C Diphyllobothriidae spargana, (muscles), (experimental)
C *Nematotaenia hylae*, (intestine)
N *Rhabdias hylae*, (lung)

Litoria latopalmata Günther, 1867 tadpole
D *Fibricola intermedius*, metacercaria, (muscles)
C Diphyllobothriidae spargana, (experimental)

Litoria lesueurii (Duméril & Bibron, 1841)
M *Parapolystomum bulliense*, (bladder)
N *Rhabdias hylae*, (lung)
Nematodes, (rectum)

Litoria moorei (Copland, 1957)
D *Haematoleochus australis*, (lungs)
D *Dolicosaccus trypherus*, (intestine)
D Digenea, (abdominal cavity)
C *Proteocephalus hylae*, (intestine)
N *Rhabdias* sp.
N *Parathelandros maini*, (rectum)
N *Austraplectana kartanum*, (rectum)
N *Maxvachonia flindersi*, (rectum)
N Nematode larvae
A *Pseudoacanthocephalus perthensis*, (rectum, intestine)

Litoria nasuta (Gray, 1842)
N *Austraplectana kartanum*
N *Maxvachonia ewersi*

Litoria nigrofrenata (Günther, 1867)
N *Pseudorictularia disparilis*, (stomach)
N Nematodes

Litoria nyakalensis Liem, 1974
M *Parapolystoma* sp., (urinary bladder)

Litoria pallida Davies, Martin & Watson, 1983
C *Nematotaenia hylae*, (intestine)

Litoria pearsoniana Copland, 1961
M *Parapolystoma bulliense*, (bladder)
D *Fibricola intermedius*, metacercaria, (muscles) (natural & experimental)

Litoria peronii (Tschudi, 1838)
D Diplostomula
D Digenea cysts, (rectum)
D Digenea
C *Nematotaenia hylae*, (intestine)
N *Rhabdias hylae*, (lung)
N *Oswaldocruzia limnodynastes*
N *Physaloptera confusa*, encysted larva, (mesentery)
N Nematodes, (lungs, rectum)
A *Acanthocephala* sp.

Litoria phyllochroa (Günther, 1863)
M *Parapolystoma bulliense*, (bladder)
N Nematodes, (rectum)

Litoria raniformis (Keferstein, 1867)
D *Gorgodera* sp., (bladder)
D *Haematoleochus australis*
D *Dolichosaccus trypherus*, (intestine)
D *Dolichoperoides macalpini*, metacercaria, (intestine)
D Diplostomula
D Echinostome cysts, (stomach)
D Plagiorchid cysts
D Strigeid cysts, (body wall)
D *Tetracotyle* cysts
D Digenea, (intestine)
C *Ophiotaenia* sp., (intestine)
C proteocephalid plerocercoids
C Cestodes
C Cestode larva, (abdominal cavity)
N *Rhabdias hylae*, (lung)
N *Rhabdias* sp., (lung)
N *Rhabdonema* sp.
N *Oswaldocruzia limnodynastes*, (intestine)
N Oxyurids, (lung, rectum)
N *Physaloptera* sp.
N Nematodes, (mesentery, intestine, stomach, rectum)
A *Porrorchis hylae*, encysted larva, (mesentery)

Litoria rothii (De Vis, 1884)
D Digenea, (small intestine)

N Oxyurid
N Nematodes, (small intestine)

Litoria rubella (Gray, 1842)
C *Spirometra erinacei*
N *Parathelandros* spp., (rectum)
N Oxyurid

Litoria verreauxii (Duméril, 1853)
C Cestodes, (small intestine)
N Nematodes, (rectum)

***Litoria* sp.**
D *Dolichosaccus* spp.
D *Pleurogenes* spp.
C Cestodes

***Litoria* spp.**
identified as *Litoria adelaidensis* from NSW
N Nematodes

***Litoria* spp.**
identified as *Litoria aurea* from WA
C Diphyllobothriidae spargana, (thigh muscle)
N *Parathelandros* spp.

Family RANIDAE

Rana daemeli (Steindachner, 1868)
N *Rhabdias australiensis*, (lung)
N Cosmocercinae gen. sp. 1
N *Seuratascaris numidica*, (stomach, intestine)
N *Pseudorictularia disparilis*

Family BUFONIDAE

Bufo marinus (Linnaeus, 1758)
D *Diplodiscus* sp.
D Amphistome
D *Dolichosaccus symmetrus*, (intestine)
D *Dolichosaccus* sp.
D *Mesocoelium mesembrinum*, (small intestine)
D *Mesocoelium* sp., (intestine, abdominal cavity)
D Lecithodendriid sp., (intestine)
D *Zeylanurotrema spearei*, (urinary bladder)
D Digenea cysts
D Digenea, (intestine, stomach, rectum, abdominal cavity, lung, buccal cavity)
C Diphyllobothriidae spargana
C ?*Spirometra mansoni*, spargana, (muscles)
C Proteocephalid plerocercoids
C *Nematotaenia hylae*, (intestine)
C Cestodes, (intestine, stomach)
N *Parathelandros mastigurus*
N *Parathelandros* spp., (intestine)
N Oxyurid
N *Maxvachonia flindersi*, (rectum)
N Cosmocercoid
N Nematode cysts
N Nematodes, (intestine, rectum, abdominal cavity, stomach wall)
A *Pororchis hylae*, encysted larva

Unidentified Anura

Frog
D *Diplodiscus megalochrus*, (bladder)
D Echinostome cysts, (stomach)
D Digenea cysts
C Cestodes, (buccal cavity)
N *Austraplectana* sp.
N *Ophidascaris phyrrhus*
N Dorylaimid, (intestine)

Tadpole
D *Dolichoperoides macalpini*, metacercaria
D *Cercaria ameriannae*, diplostoma
D *Cercaria angelae*, cysts, metacercaria
D *Cercaria ellisi*, cysts
D *Cercaria lethargica*
D K.I. Stylet cercaria, (experimental)
D J.W. Stylet metacercaria
D Echinostome J cercaria, (experimental)
D Echinostome cysts, (experimental)
D Digenea cysts
D Digenea cysts, (experimental)
N *Ophidascaris pyrrhus*, (experimental)
N *Rallietascaris varani*

Acknowledgments

To each of the curators of the parasitic sections in the many museums in Australia and overseas that I contacted in the preparation of this work I express my deepest gratitude. I would also like to thank my fellow PhD students, Mr Steve Richards and Ms Sylvie Pichelin, for their much appreciated patient assistance with frog and monogenean taxonomy, respectively. Drs David Blair, Tom Cribb, Ian Beveridge, and Margaret Davies, and Mrs Pat Thomas who offered advice and support throughout the preparation of this manuscript, also receive my warmest thanks.

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